AMENDMENTS TO THE CLAIMS:

The below listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

1-63 (Canceled)

64. (Previously Presented) An intracorporeal device comprising an elongated member having means for causing a substantially linear change in bending stiffness over a longitudinal length of the elongated member.

65. (Previously Presented) The device of claim 64 wherein the length of the elongated member has a continuously changing taper angle producing a curvilinear profile that is configured to produce the substantially linear change in bending stiffness over said length.

66. (Previously Presented) The device of claim 64 wherein the elongated member has a plurality of tapered segments configured to produce the substantially linear change in bending stiffness over the length of the member.

67. (Currently Amended) The device of claim [64] 66 wherein each tapered segment has a substantially constant taper angle.

68. (Previously Presented) The device of claim 66 wherein the elongate core member comprises at least 3 to about 100 tapered segments.

69. (Previously Presented) The device of claim 64 wherein the elongated core member comprises a material with changing hardness in a longitudinal direction configured such that the change in hardness produces a substantially linear change in bending stiffness along the length of the core member.

70. (Previously Presented) The device of claim 64 wherein the elongated member tapers distally to a more flexible distal portion.

71. (Previously Presented) A guidewire comprising an elongate core member with at least one longitudinal section having a diameter defined substantially by the formula:

$$D_L = \left[\frac{64CL}{E\pi} + D_0^4 \right]^{\frac{1}{4}}$$

where D_L is the diameter of the elongate core member at length L from a position of starting diameter D_0, E is the modulus of elasticity of the core member material, and C is a constant that depends on the boundary conditions of the longitudinal section.

72. (Previously Presented) A guidewire as defined in claim 71, wherein said core member is formed of one of the group constituting stainless steel, NiTi alloys and combinations thereof.

73. (Previously Presented) A guidewire as defined in claim 71, wherein said core member has a proximal core section, said proximal core section being coated with a lubricious coating.

74. (Previously Presented) A guidewire as defined in claim 71, wherein said core member has a distal core section, said distal core section being coated with a lubricious coating.

75. (Previously Presented) A guidewire as defined in claim 71, wherein said core member has a distal core section, and a flexible body disposed about and secured to the distal core section.

76. (Previously Presented) A guidewire as defined in claim 71, wherein the guidewire comprises at least 3 to about 100 tapered segments.

77. (Previously Presented) A guidewire as defined in claim 71, wherein the guidewire comprises at least 5 to about 20 tapered segments.

78. (Previously Presented) A guidewire comprising an elongate core member with at least one longitudinal section having a moment of inertia defined substantially by the formula:

$$I_L = \frac{CL}{E} + I_o$$

where I_L is the moment of inertia of the longitudinal section at length L from a position of starting inertia I_0, E is the modulus of elasticity of the longitudinal section, and C is a constant that depends on the boundary conditions of the longitudinal section.

79. (Previously Presented) A guidewire as defined in claim 78, wherein said core member is formed of one of the group constituting stainless steel, NiTi alloys and combinations thereof.

80. (Previously Presented) A guidewire as defined in claim 78, wherein said core member has a proximal core section, said proximal core section being coated with a lubricious coating.

81. (Previously Presented) A guidewire as defined in claim 78, wherein said core member has a distal core section, said distal core section being coated with a lubricious coating.

82. (Previously Presented) A guidewire as defined in claim 78, wherein said core member has a distal core section, and a flexible body disposed about and secured to the distal core section.

83. (Previously Presented) A guidewire as defined in claim 78, wherein the guidewire comprises at least 3 to about 100 tapered segments.

84. (Previously Presented) A guidewire as defined in claim 78, wherein the guidewire comprises at least 5 to about 20 tapered segments.